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## <u>CLAIMS</u>

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a first circuit configured to wake-up a second circuit in response to an input signal, wherein said input signal comprises a programmable delay value.

An apparatus comprising /

- 2. The apparatus according to claim 1, wherein said input signal comprises a user programmable signal.
- 3. The apparatus according to claim 1, wherein said input signal comprises a multi-bit signal.
- 4. The apparatus according to claim 1, wherein said delay value comprises a programmable delay value.
- 5. The apparatus according to claim 1, wherein said delay value comprises a wake-up timing value.
- 6. The apparatus according to claim 1, wherein said first circuit comprises:

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a delay circuit configured to present a first delay signal; and

a select circuit configured to present a second delay signal in response to said first delay signal, wherein said second delay signal is configured to wake-up said second circuit.

- 7. The apparatus according to claim 6, wherein said input signal is configured to control a programmable delay of said second delay signal.
- 8. The apparatus according to claim 7, wherein said programmable delay comprises a multiple of said first delay signal.
- 9. The apparatus according to claim 6, wherein said select circuit is further configured in response to said input signal.
- 10. The apparatus according to claim 6, wherein said select circuit comprises:
- a divider circuit configured to present one or more divided signals in response to said first delay signal; and

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a multiplexer configured to present said second delay signal in response to said one or more divided signals and said input signal.

- 11. The apparatus according to claim 6, wherein said select circuit comprises a counter configured to generate said second delay signal in response to said input signal.
- 12. The apparatus according to claim 6, wherein said delay circuit is further configured to present said delay signal in response to an enable signal.
- 13. The apparatus according to claim 1, wherein said input signal is generated in response to a device selected from the group consisting of input pins, data pins, microprocessor code, and firmware.
  - 14. An apparatus comprising:
- a first circuit configured to operate in a first mode or a second mode; and

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a second circuit configured to control switching of said first circuit from said first mode to said second mode after a programmable period of time.

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- 15. A method for wake-up timing comprising the steps of:
- (A) receiving an input signal; and
- (B) waking-up a circuit in response to said input signal, wherein said input signal comprises a programmable delay value.
- 16. The method according to claim 15, wherein said input signal comprises a user programmable signal and said delay value comprises a programmable delay value.
- 17. A computer readable medium containing instructions to execute the steps of claim 15.
- 18. The method according to claim 15, wherein step (B) further comprises the sub-steps of:
  - (B-1) presenting a first delay signal; and

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(B-2) presenting a second delay signal in response to said first delay signal, wherein said second delay signal is configured to wake-up said circuit.

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- 19. The method according to claim 18, wherein step (B) further comprises the sub-step of:
- (B-3) controlling a programmable delay of said second delay signal.
- 20. The method according to claim 15, further comprising the step of:
- (C) generating said input signal in response to input pins, data pins, microprocessor code, and/or firmware.

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